IN THE CLAIMS

1. **(currently amended)** A voice activity detector that detects talkspurts in an input signal, comprising:

a frequency spectrum calculator that calculates a frequency spectrum of the input signal;

a flatness evaluator that ~~calculates~~ finds a maximum value of the frequency spectrum, adds up differences between spectral components and the maximum value thereof, and generates the resulting sum of the differences as a flatness factor indicating flatness of the frequency spectrum, wherein said flatness evaluator calculates an average of spectral components of the input signal, normalizes the resulting sum of the differences by dividing by the calculated average, and outputs a normalized flatness factor; and

a voice/noise discriminator that determines whether the input signal contains a talkspurt, by comparing the normalized flatness factor of the frequency spectrum with a predetermined threshold.

2. (original) The voice activity detector according to claim 1, wherein:

the input signal is provided on a frame basis; and

said frequency spectrum calculator comprises either a spectral analyzer that analyzes the given signal frame in frequency domain, or a plurality of bandpass filters that divide the given signal frame into individual frequency components so as to calculate power of each frequency component.

3. – 27. **(canceled)**

28. **(new)** A voice activity detector that detects talkspurts in an input signal, comprising:

a frequency spectrum calculator that calculates a frequency spectrum of the input signal;

a flatness evaluator that adds up differences between adjacent spectral components of the input signal and generates a resulting sum of the differences as a flatness factor indicating flatness of the frequency spectrum, wherein said flatness evaluator calculates an average of spectral components of the input signal, normalizes the resulting sum of the differences by dividing by the calculated average, and outputs a normalized flatness factor; and

a voice/noise discriminator that determines whether the input signal contains a talkspurt, by comparing the normalized flatness factor of the frequency spectrum with a predetermined threshold.

29. **(new)** A voice activity detector that detects talkspurts in an input signal, comprising:

a frequency spectrum calculator that calculates a frequency spectrum of the input signal;

a flatness evaluator that calculates a flatness factor FLT indicating flatness of the frequency spectrum; and

a voice/noise discriminator that determines whether the input signal contains a talkspurt, by comparing the flatness factor FLT of the frequency spectrum with a predetermined threshold THR,

wherein said flatness evaluator calculates an average Pm of spectral components of the input signal, determines the threshold THR from the average Pm, counts a number of

spectral components that exceed the threshold THR, and uses the resulting number as the flatness factor FLT of the frequency spectrum, and

the flatness factor FLT and the threshold THR are given by

$$FLT = \underset{k=L}{\overset{M-1}{count}} (P[k] > THR)$$

$$THR = Pm * COEFF$$

where L and M are lower and upper ends of a frequency range of the input signal, k is a frequency, P[k] is a spectral component of frequency k, count() is the number of the spectral components that exceed the threshold THR, and COEFF is a multiplication factor.

30. **(new)** A voice activity detector that detects talkspurts in an input signal, comprising:

a frequency spectrum calculator that calculates a frequency spectrum of the input signal;

a flatness evaluator that calculates a flatness factor FLT indicating flatness of the frequency spectrum; and

a voice/noise discriminator that determines whether the input signal contains a talkspurt, by comparing the flatness factor FLT of the frequency spectrum with a predetermined threshold THR,

wherein said flatness evaluator finds a maximum value P_{MAX} of the frequency spectrum, determines the threshold THR from the maximum value P_{MAX}, counts a number of spectral components that exceed the threshold THR, and uses the resulting number as the flatness factor FLT of the frequency spectrum, and

the flatness factor FLT and the threshold THR are given by

$$FLT = \underset{k=L}{\overset{M-1}{count}} (P[k] > THR)$$

$$THR = Pm * COEFF$$

where L and M are lower and upper ends of a frequency range of the input signal, k is a frequency, P[k] is a spectral component of frequency k, count() is the number of the spectral components that exceed the threshold THR, and COEFF is a multiplication factor.